DOCUMENT RESUME

ED 419 264 CS 509 852

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TITLE Organizing for the Future Requires the Non-Aristotelian Lens of a Dragonfly.
PUB DATE 1998-05-00
NOTE 17p.; Paper presented at the Joint Meeting of the National Communication Association/International Communication Association: "Communication--Organizing for the Future" (Rome, Italy, July 15-18, 1998).
PUB TYPE Opinion Papers (120) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Critical Thinking; *Feminism; *Futures (of Society); *Global Approach; Thinking Skills
IDENTIFIERS Evaluative Meaning; *General Semantics Paradigm (Korzybski); General Systems Theory; *Philosophical Dualism; Postmodernism

ABSTRACT

To organize for the future requires non-Aristotelian thinking...a multifaceted wide-angle lens revealing hidden information. A multifaceted lens includes at least three general systems of evaluation, all of which promote complex thinking. The three systems are general semantics, postmodern feminist philosophy, and the unifying principle of transformation. Each contributes to an understanding of dualism from unique angles. General semantics illumines to what extent dualism influences human language, thought, and actions. Postmodern feminist philosophy reveals how dualism segregates human beings into categories of superior versus inferior beginning with gender identity. The unifying principle of transformation identifies dualistic thinking as one of several phases in social development. Human social organization is radically shifting from linear, replicating patterns, to complex non-linear patterns. Sophisticated information media and worldwide transportation have created a broad base of common information and along with it, a much higher probability of newly combined information, beliefs, ideas, and cultures. Along with this new complex level of adaptability comes cooperation on a global level, a synergism between contrasting beliefs and concepts, inventiveness, social determinism and creative exploration. To thrive in a new century of multiple dimensions, multiple values, multiple directions, and multiple levels requires a deeper understanding of why people think the way they think in order to evolve beyond dualism. (Includes 30 notes; attached is a chart representing "dualism.") (NKA)

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ED 419 264

Organizing for the Future Requires the Non-Aristotelian Lens of a Dragonfly

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© May, 1998

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"There are fish,
and then there are dragonflies.
The fish knows only the pond;
the dragonfly know the universe.
Which would you rather be at the dawn of the 21st Century?"

The above allegory illustrates dualism, a linear, "either/or" way of thinking. Dualistic thinking dictates the infrastructure of our language and our language in turn, influences the way we think. Dualism is a doctrine describing everything in the universe as "being under the dominion of two opposing principles, one which is "good" [superior, master, right, white, up, top, etc.], and the other, "evil" (inferior, slave, left, wrong, down, bottom, etc.]."[1] We have been interpreting the world through this narrow either/or lens for the last 5000 years.

Since organizing for the future will require complex, non-linear or multidimensional thinking strategies,[2] the linearity inherent in dualism is bound to impede our organizational efforts. Ironically, the allegory was written to argue in favor of complex thinking, but alas, linear language construction[3] has also impeded the communication capabilities of this writer. Even if language were designed to accommodate multidimensional levels of abstract interpretation, such verbiage would only serve to confuse the reader (socialized to one degree or another), into identifying complexity as a precursor to "chaos,"[4] Using linear language construction in the allegory is a practical place to start when contemplating the development of complex thinking techniques, for it seems the journey must begin with a stroll "down" (or is it "up?")[5] that linear path.[6] Such realization in and of itself is...well, complex! To thrive in a new century of multiple dimensions, multiple values, multiple directions and multiple levels, requires a deeper understanding (complex) of why we think the way we think (dualistic), in order to evolve. "From Zen to comedy to science, skillful use of the binary leads beyond it...We aim not just to go beyond binary

but also to embrace it as a way to go beyond" (Volk 97).

Dualities Exhibited in the Allegory

- "There are fish, and then there are dragonflies" implies one being biologically superior over the other. The fish can only survive in water, has limited vision and attributes adapting it only to underwater mobility. The dragonfly on the other hand, survives both on land and in water, darts all over the place (at over 35 miles an hour), can stop in an instant and most importantly, is endowed with multi-faceted eyes for keen vision (Haarstadt, MN Department of Natural Resource).

- "Fish" and "dragonflies" conjure up culturally contrived symbols. The fish could most certainly represent Christianity, tradition, hierarchical order and fixed ideas, while the dragonfly could symbolize etherealness, illusionary beauty, swiftness, flexibility and the complexity of summer.

- Both fish and dragonfly respectively represent only two perceptions, one maintaining a limited understanding of the universe and the other a broader understanding.

- "Which would you rather be in the 21st Century?" begs a single choice answer. You can either be a fish or a dragonfly. You can either languish in the pond (inferior), or thrive in the universe (superior). Dualistic thinking will not allow for complexity. You cannot possess the traits of both, or have the traits of neither. The duality in the act of choosing is limited but clear: "go fish," or "go dragonfly!"

- The allegory metaphorically implies that there are only two kinds of people existing in the world...those who are "fish-like" (Aristotelian), [7] and those who are "dragonfly-like" (non-Aristotelian).[8]

To make matters even more confusing, non-Aristotelian precepts (the message in the allegory), can include Aristotelian concepts (how the message is being transmitted), and that certainly is complicated! But do not trouble yourself with this conundrum; just keep your eye on the dragonfly's eye.

Organizing for the Future

To organize for the future requires non-Aristotelian thinking...a multifaceted—wide-angle lens revealing hidden information. A multifaceted lens includes at least three general systems of evaluation all of which promote complex thinking. "General" implies a broad overview of everything that makes us human, and "systems" suggests the underlying mechanics of human thought and language as it moves and unfolds into newly discovered hypotheses. General systems of evaluation focus on the underlying determinants of culturally constructed reality and self identity, and provide the where with all to reconstruct them.

General semantics, postmodern feminist philosophy and the unifying principle of transformation each contribute to an understanding of dualism from three unique angles. General semantics illumines to what extent dualism influences our language, thoughts and actions. Postmodern feminist philosophy reveals how dualism segregates human beings into categories of superior versus inferior beginning with gender identity. The unifying principle of transformation identifies dualistic thinking as only one of several phases in human social development.

General Semantics

The philosopher Alfred Korzybski[9] describes the general evaluation system inherent in general semantics as non-Aristotelian. Aristotelian logic[10] he maintained, inhibits human social development and impedes productive human communication. In his treatise, Science and Sanity, An Introduction to Non-Aristotelian Systems And General Semantics, Korzybski claimed that humankind's creative potential and problem solving capabilities were undermined by the "academically-revered and ubiquitously-exercised Aristotelian formulations of logic" (xii).[11] Aristotelian logic is defined in Wendell Johnson's People in Quandaries, The Semantics of Personal Adjustment as

"either/or thinking." Everyday issues and experiences however, are not so sharply defined as either/or, nor can they be evaluated with a two-valued system of thought. How we think then, must be revised and made more flexible to accommodate the complex, multi-valued aspects of human social interaction repeated in the physiological[12] systems found in nature. As Korzybski states, "This requires a physico-mathematical 'way of thinking' which a non-Aristotelian system supplies"(xxxiv).[13]

Postmodern Feminist Philosophy

The second general system of evaluation addresses dualistic thinking as synonymous with androcentrism[14] and thus aligns it with postmodern feminist philosophy.[15] The first discrimination we experience as infants involves gender identity. Males and females are socialized differently from birth. The resulting alienation follows us through out life.

Aristotelian thinkers believe there are only two gender based orientations (as in "the opposite sex.")[16] one (male) being superior to the other (female).

Sandra Lipsitz Bem's The Lenses of Gender proposes the theory that "androcentrism," or male centeredness is embedded in human discourse, social institutions, and individual psyches. Androcentrism contributes to the shaping of gender identity and becomes locked into our very psyches as "gender personality." Within this culturally and socially determined view, man is treated as the "norm"—human, and woman as "other"—sub-human. Such inequality perpetuates gender stereotyping ("Madonna" versus "whore" and "superman" versus "wimp"), and lays the ground work for all subsequent prejudice (self loathing, racism, sexism, homophobia, age discrimination, etc.). Androcentrism contributes to gender polarization, and could not exist without dualistic thinking (Bem 19).

The Unifying Principle of Transformation

The third general system of evaluation originates in anthroponomy,[17] and is called the unifying principle of transformation. Biologists Land and Jarman

describe the unifying principle of transformation as a "general systems theory" (30), and like Korzybski, set out to cover a broad range of phenomena in many interrelated areas with a "minimum of postulates" (Korzybski xiv). But the unifying principle of transformation also describes a generative form of order.[18] in which all things must grow (transform, move, change, "breakpoint," develop), or ossify—die. Transformation is a necessary part of the natural bifurcating[19] process by which cells, organisms, humans and human societies flourish, multiply and strive toward complex levels of adaptation. Periods of transformation (chaos]. between phases of development, enable the organism to change direction sometimes radically, in order to survive (Land and Jarman 5).[20]

Phases and Transformations

Fundamentally, there are three distinct phases in cell evolution. The first is referred to as the forming phase, when the organism (or human society), searches for initial patterns.[21] the second is the norming phase, when the organism finding systems that seems to work, organizes, repeats and improves upon already established linear patterns (traditions, dualism doctrine, etc).[22] and the third is the fulfilling phase, which can only occur after a successful norming or linear phase. The organism then begins to integrate and reconfigure systems into more complex patterns that involve innovation and mutualism.[23] These three phases constitute a cycle of growth in an organism or community of organisms, and can be identified in the social history of a single human being or group of human beings. Once this third phase is reached, the cycle of phases interrupted by periods of transformation, repeats itself on a higher (more complicated) level of growth, unfolding toward yet another level of complexity in continuum.

Dealing with Dualism

Dualistic thinking still dominates our "norming phase—age" [24] which began sometime around 500 B.C. The characteristics of this phase included the

supplementation of written symbols from the organic information storage and retrieval system of the previous forming phase, enabling a sharing and exchanging of information. A shift to replicative societies facilitated unequal forms of data between social classes (Land, 43). "The need to replicate the growing 'group self' manifested in repressive and disciplined education that forced each new generation into archaic conformity and standards" (Land 43). Society expressed growth in the form of missionary activity, imperial conquests, nationalism, and made sure "others become like us" (Land 43). Wars were fought to colonize with the conquered forced to adhere to the "right" standards. Growth was based on "cause and effect" and exhibited an orderly predictable pattern, building on the extension of likeness. Culturally, male human beings took control over their destiny by manipulating and dominating nature and each other, through a hierarchical or linear power structure whereby physical power was coercive, and ownership (property, women, children and slaves), and conquest prevailed (Land and Jarman 81).

> The notion that the application of logical principle [Aristotelian] could lead to control over nature differed radically from the first phase spirit-guided worldview. The invisible fuel behind the towering revolution that built civilization was a belief in the power of the human mind to cause things to happen. This belief in a logical cause leading to a specific effect, which began as far back as 8,000 years ago, has progressively gained momentum. Today this same belief holds us captive." (Land and Jarman 81).

Our hierarchical social structure which has defined human social development for the past 5000 years, has been entwined with human suffering as well as adulation. Feeling "inferior" to the forces of nature contributed to "man's" idealized image of himself as "superior." Maintaining "superiority" over nature (controlling and dominating "her"),[25] required a plethora of inventive strategies spanning centuries. Present day technology is the product and by-

product of that pseudo-conquest. But like a pile of books stacked too high, human cultures[26] based on the linearity inherent in dualistic thinking have begun to sway, (for nothing ever remains the same), and like the linear line of books, societies are bound to tumble (synonymous with "transform" not "disintegrate"), into new and more complex configurations. Linear-like organizing limits interaction between people on broad levels, or metaphorically speaking, a vertical—replicating line of books only allows each book to touch the next directly above or below. In a non-linear or multi-directional pile-up however, the books touch one another at a variety of angles and levels. Likewise, non-linear kinds of organizing amongst humans allows for communication on multiple levels, resulting in multiple options. Multiple options afford the members of any group the many opportunities for mutual success and survival. Communicating in various ways "on line," is more multidimensional than communicating over a single telephone wire. Technology has provided the opportunity for social reconfiguration on more complex levels.

But human culture is "swaying" beyond linierity and uniformity for other reasons as well. The same technology that liberated us from our biological destiny (the invention of the birth control pill and the condom), and provided us with global communication, is simultaneously destroying the delicate interconnecting strands that weave the complicated web of life. Without a radical change in thinking, human social development will literally (and linearly) stagnate and die. If "we" humans continue to see ourselves as

"superior" to nature[27] rather than an intricate part of it, we as a species are doomed to extinction.

The Fulfilling Phase

Human social organization is radically shifting (paradigm shift), from linear—replicating patterns, to non-linear—multidimensional patterns. Sophisticated information media and worldwide transportation have created a broad base of common information and along with it, a much higher probability of newly combined information, beliefs, ideas and cultures (Land 45). Recombining ideas and environments presents a great opportunity for many cultures to be intermingled, naturally producing "ectogenetic, hybrid vigor" (Land 45). Along with this new complex level of adaptability comes entrepreneurial ship, cooperation on a global level, a synergism between contrasting beliefs and concepts, inventiveness, social determinism[28] and creative exploration (Land and Jarman 40).[29]

Whether we enter the 21 Century, (the century of multi dimensionality), winged (the dragonfly), or with feet dragging (the fish), we are headed for dynamic changes. That is the order of things! The allegory suggests that we must shed our linear-like cocoons, larvae and the like, as naturally as any caterpillar or nymph, in order to fly unencumbered into the multi-dimensionality which will epitomize the next century. Knowing why we think the way we think, hastens the natural metamorphosing of dualistic thinkers into complex thinkers—the "dragonflies of summer."[30] Everything in the universe is not polarized after all. "That which is above and below are one and the same. The difference is in distance and motion. Aristotle's insights were superseded by Copernicus three centuries ago" (Morrison, Morrison, 4).

Being cognizant of the precept that truth and reality can be socially constructed is an important component in non-Aristotelian thinking. It empowers the individual with the capacity to control his or her own perception

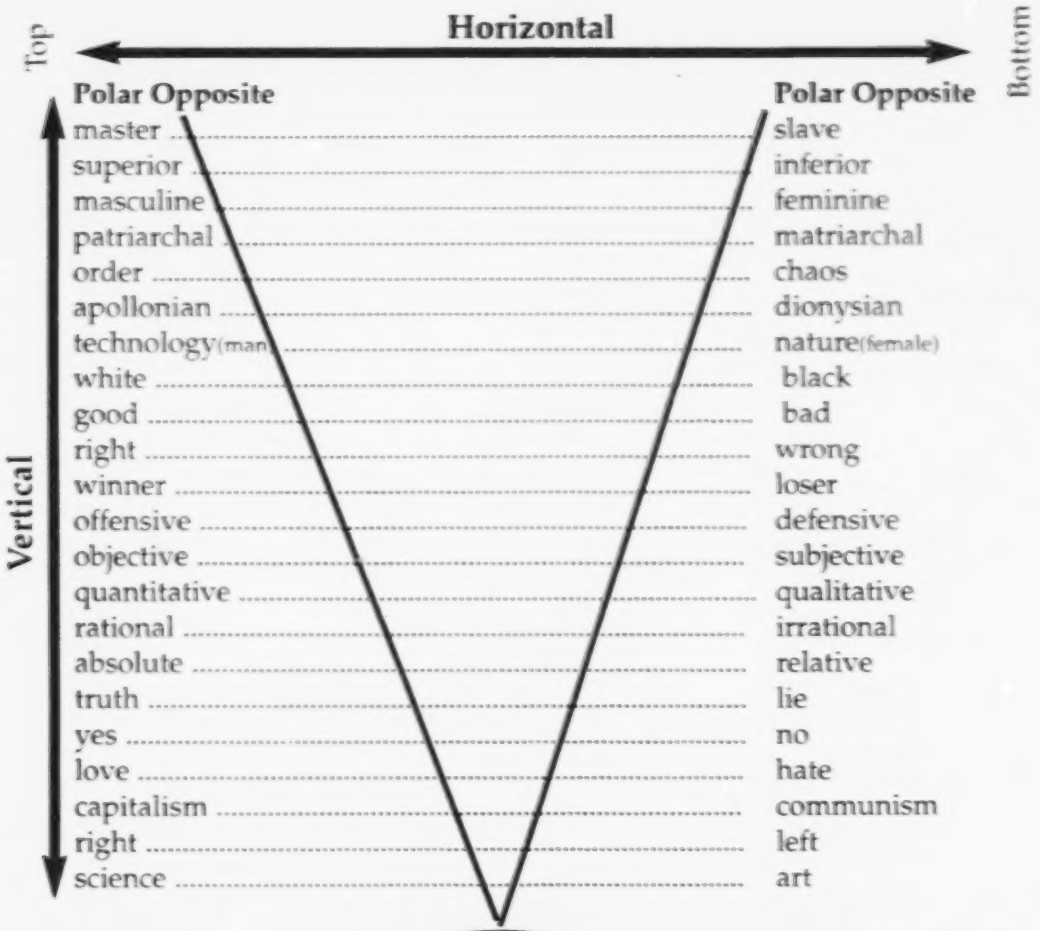
of reality. It facilitates the self-esteem needed to responsibly organize global solidarity or the social conscious concern for "we the human race" being synonymous with "I the individual." "If we could only co-create reality, which in turn creates us, then we are called to a new kind of community. If I can make culture, I must act responsibly. If I can only be a part of the creation, I must act humbly" (Ohara, 13). Soar into the 21st century, dragonflies!

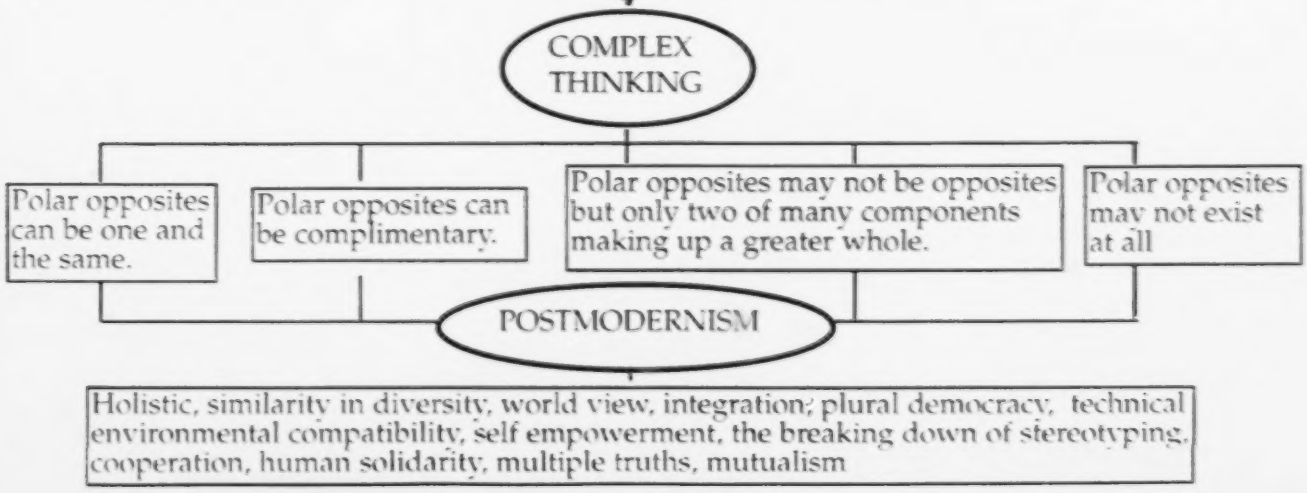
Dualism

A doctrine that the universe is under the dominion of two opposing principals, one which is good and the other which is evil. *Webster's Dictionary*

If this chart is read vertically, words will create and reflect polarization as constructed through dualistic thinking.

If you turn this chart horizontally, these words will reflect the judgmental overlay found in a hierarchical social structure which assumes that something is always superior or inferior to something else.




COMPLEX THINKING
Polar opposites can be one and the same.
Polar opposites can be complimentary.
Polar opposites may not be opposites but only two of many components making up a greater whole.
Polar opposites may not exist at all
POSTMODERNISM
Holistic, similarity in diversity, world view, integration, plural democracy, technical environmental compatibility, self empowerment, the breaking down of stereotyping, cooperation, human solidarity, multiple truths, mutualism

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End Notes

1 (Webster's Dictionary, 9th ed.).

2 Complex in this paper is synonymous with non-linear thinking, non-Aristotelian and multidimensional perspective. It is the result of two broad psychological processes: differentiation and integration. Differentiation implies movement toward uniqueness, toward separating one's self from others. Integration refers to its "opposite," a union with seemingly antonymous parts, other people, ideas and entities beyond self. A complex self combines both of these entities (Csikszentmihalyi, 249).

3 Linearity or linear means: relating to, resembling or having a graph that is a line and especially a straight line. It involves a single dimension (OED New Edition). Linearity or being linear resembles having a straight line or involving a single dimension (OED). Linear construction or linear thinking screens out much of reality as "irrelevant" to an either/or way of viewing the universe.

4 Chaos theory encompasses a wide range of interdisciplinary research that includes work in such fields as nonlinear dynamics, irreversible thermodynamics, meteorology, and epidemiology. It is generally understood as the study of complex systems where two general emphases exist. Chaos is seen as order's precursor and partner, rather than its opposite. There is a spontaneous self-organization from chaos and a "...realization that entropy-rich systems facilitate rather than impede self-organization" (Hayles 9). "[This]... was an important turning point in the contemporary reevaluation of chaos"; the second branch emphasizes the hidden order that exits within chaotic systems (Hayles 2). For the purpose of this paper, chaos is described in the unifying principle of transformation as "break-points" or periods of transformation that move the organism (human society), from one phase of development to the next.

5 "up" and "down," "left" and right," "black and white" are words that originate in dualistic thinking.

6 Multiples are normal. Comprehending the world as multidimensional is nothing new. Once the gods were human, and humans were gods. Realities were interchangeable. Nature and humanity, mind and body were one and the same. The theme of multiplicity despite "man's" proclivity toward dualistic thinking appears and reappears through out the early forming phase of human history. A multiple pf goddesses from pre-patriarchal rule : Artemis, Aphrodite, Athena, Demeter, Hera and Hecuba had been incorporated into the Greek pantheon by the eight century B.C. (Wolf 98). Nature is multidimensional and multidirectional. For example, plants are interspersed and diffused so that each balances and corrects the vulnerability of the o'hers. Man by contrast, plants row after row (linear) magnifying the plants' vulnerability to disease. Humans compensate by using harsh chemicals and pesticides which in turn send a rippling effect of poisons

through out the entire ecological system. (Ruether, 90).

7. An Aristotelian is a person who views the world in a "linear, either/or" way, and therefore cannot see how culture constructs self-identity and social reality. He or she sees only through the single lens culture (dualism doctrine), provides. What is seen is narrow, dualistic, omnipotent and absolute. The word "Aristotelian," was derived from its namesake Aristotle, an ancient Greek philosopher who fastidiously documented his own socially constructed reality rooted in dualistic thinking. We "moderns" mistook his observations to be an absolute truth rooted in nature and ordained by God" (Johnson, 1946, 6)

8. A non-Aristotelian is a person who views the universe in a non-linear, or complex way, and therefore can see how culture constructs self-identity and social reality. She or he can see through a multiple lens that transcends culture (dualism doctrine). What is seen is broad, multidimensional, interconnected and in a constant state of flux.

9. Alfred Korzybski did not refer to himself as a philosopher but as a "general semanticist" (Korzybski, 19-36).

10. Aristotelian logic is a kind of logic defined by the Greek philosopher Aristotle (384-322 BC), who held philosophy to be discerning through the use of systematic logic as expressed in syllogisms, of the self-evident, changeless first principles that form the basis for all knowledge. Logic is a systematic study of valid inference. Classic or Aristotelian logic is concerned with the format properties of an argument, not its factual accuracy. Aristotle, in his Organon, held that any argument could be reduced to a sequence of three positions (two premises and a conclusion) (The Concise Columbia Encyclopedia 473). Aristotle was an intensional biologist. He perceived the world from a macroscopic (if I do not see it, it is not there) mentality. His ideas overpowered the extensional mathematical philosopher Plato, who suggested the presence of an unseen sub-microscopic structure in nature and in human culture (Korzybski 726).

11. Korzybski in Science and Sanity suggests that there is no such thing as logic but rather "emotional logic" since all so called "logic" is colored by the social and emotional make up the logician (79)

12. A system that includes "the totality of life, from the tiniest squiggling bacteria miles deep in the ocean to the high-flying sandhill cranes overtopping Mount McKinley in Alaska" (Volk, Gaia's 4).

13. Physico-mathematical is the mixed (mathematics) consisting of physical subjects investigated and explained by mathematical reasoning in order to comprehend Mechanics, Astronomy, Optics, etc., and are sometimes styled the Physico-Mathematical Sciences (Oxford English Dictionary, 1852). Korzybski preferred to define General Semantics as physico-mathematical rather than philosophical. Philosophy, he maintained, existed within the confined boundaries of a culture's social reality

(Korzybski xxi). " . . . [I]ntroduced the term 'General Semantics' for the modus operandi of this first non-Aristotelian system'" (xxxiv).

14. Androcentrism describes a male-centered perspective of reality which defines men as not just inherently superior to women, but defines male experience as a neutral, universal standard or "norm," and females and female experience as a sex-specific deviation from that norm (Bem 20).

15. Postmodern feminist philosophy (a) broadens traditional feminist perspective which adhered to an Aristotelian based premise that there is a "woman's way of knowing" rooted in biology (essentialism). By transcending this premise, postmodern feminist philosophy becomes non-Aristotelian in scope so as to include gender-based orientation as culturally contrived and part of a much broader general system of evaluation (Nicholson 3); (b) merges feminist philosophy with epistemology proper (Alcoff and Potter 313), making this study possible within the academic bastion of scholastic perpetuity; advances beyond essentialism and poststructualism by embracing feminist standpoint theory which argues that individuals interpret their own experiences and imbue them with meaning within an historical and cultural context (Wood 13). Feminist standpoint theory seeks to understand the distinctive features of women's experience as it occurs within a patriarchal culture and how culture in turn is evaluated by them. By merging feminism with epistemology proper (Alcoff and Potter 313), postmodern feminist philosophy can restructure the culture that shaped patriarchal research traditions and gender identity in the first place.

16. The term the "opposite sex" is an example of dualistic thinking pertaining to gender identity as it manifests in language construction.

17. Anthroponomy is the science dealing with the laws of human development in relation to environment and to other organisms. The unifying principle of transformation, as it applies to human social development, is one of three general systems of evaluations found in this study. It is "anthroponomic" (Land 240).

18. Order can be both simple and complex. It can generate from simple to complex, or complex to simple. It can generate from inward to outward, outward to inward, or manifest in higher degrees or lower degrees. Moreover, order can be eternal (timeless) or secular (temporal). Order on a simple level is experienced in a variety of situations and contexts. For instance, there is the order of points on a line, space and time, numbers, mechanical interaction of parts in a machine, etc., then there are the complicated, multidimensional patterns found in generative kinds orders (one order evolving from and interacting with another, and embodied in chaos, random and infinite order), generating growth and change in creative thought (Korzybski 161). Complex forms of generative order are in a constant state of flux or fluidity, in that they must be continually modified in accordance with the context of change inevitable in human experience (Korzybski 107). They pervade all aspects of life, and contain similar differences, and conversely, different similarities. Order in a broad sense lies in a spectrum from subtle orders of low degree to chaotic orders of high or infinite degree. There is no such thing as disorder.

Random order (often misidentified as disorder), is a "limited case of the infinite degree" free from any significant correlations with suborders of lower degree; in other words, what is taken for a chaotic or random loss of order is in fact a hidden order of high degree that is generated initially, out of a simple order (Bohm and Peat 127, 173). Generative orders are relative to nature, human consciousness, and creative thinking in that a general principle (idea, form, word, perception, kernel, seed, etc.) unfolds into the particular. For example, the root word "generate" can unfold into the word "general" and "genius" (Bohm and Peat 151); in the same way, the generating of creativity basically originates from some general perception. The general perception unfolds into particular forms. General perception is synonymous with a "universal consciousness" which may explain why artists have the ability to predict social trends through their art (Shlain 219). "Generally it is believed that some 'genius' must come along and develop new ways of painting which then enable the public to 'see' in exciting new ways" (Bohm and Peat 167).

19. Bifurcation occurs in the "fulfilling phase" of growth in any organism or human society. In this phase, two simultaneous activities are going on; the growing organism is fulfilling its third phase potential and at the same time a bifurcation, or "splitting" apart, occurs where a new first phase at a higher level of complexity is occurring (Land, Jarman 226).

20. Transformation: all living things must grow or die. Transformation is the necessary part of the natural bifurcating and replicating process by which cells, organisms, humans and human societies flourish, multiply and strive toward complex levels of adaptability, Moments of transformation between phases of relative tranquility, enable the organism to change directions sometimes radically, in order to survive (Land, Jarman 5).

21. The "forming phase" is a phase of growth where the type of creativity relies on invention. The growing organism is searching for an initial pattern of successful growth that will connect it with its environment (Land and Jarman 230).

22. The "norming phase" occurs once the first phase pattern has been invented, a breakpoint or moment of transformation is then encountered where growth demands that creative efforts shift to building on the pattern, by repeating, improving and extending it (Land and Jarman 231).

23. The "fulfilling phase" occurs after a successful norming phase. The system then opens up to creative innovation and mutualism. This requires integrating what was previously excluded and including the new and different within the old pattern (Land and Jarman 231).

24. "In the Western world, a relatively small group of Greek philosophers and mathematicians brought to conscious awareness the change in fundamental thinking that enabled hunters and gatherers to create the Agricultural Revolution." These ancient

Greeks discovered that underneath all the energy required to build a civilization resided in their own ability to reason. "Once known and understood, these mental tools could be rigorously applied even more effectively to control nature. . . .[H]omer captured the great shift from a mind that believed in spirits to one governed by human rationality when Circe said to Odysseus, 'There is a mind in you no magic can touch'" (Land and Jarman 81).

25. Even today, whole earth scientists still insist on imagining the eco system as "mother earth," or "Gaia."

26. Referring to technologically advanced societies (norming phase in human social development).

27. Anthropocentric considers human beings as the most significant entity of the universe and interprets or regards the world in terms of human values and experiences (Land 240).

28. If people understood the political modus operandi behind their socially and culturally constructed institutions, values systems, political structures, hierarchical class systems, in short, the socio-political fabric of Aristotelian logic, they might have some chance at consciously determining their own social destiny.

29. "The changes that this will bring will be so great that their full impact may well be beyond our imagination. No longer will we perceive ourselves as isolated individuals; we will know ourselves to be part of a rapidly integrating global network, the nerve cells of an awakened global brain" (Russell 93).

30. A butterfly is a more complicated organism than the caterpillar because the butterfly can reproduce insuring the continuation of the species. The dragonfly is a more complicated organism than the nymph for the same reason.